KHLEBTSEVICH, A.M.

Practices of the Prokop'yevsk Administration for Mechanization of the State Trust for the Mechanization of Coal Mining. Mekh. stroi. 21 no.3:20-21 Mr 64. (MIRA 17:3)

1. Glavnyy inzh. tresta Shakhtostroymekhanizatsiya, g. Prokop'yevsk.

KHLEBTSEVICH, YU.S.

VARVAROV, N.A.; DOBRONRAVOV, V.V., professor, doktor fiziko-matematicheskikh nauk; MERKULOV, I.A., inzhener-konstruktor; SERYAPIN, A.D., laureat Stalinskoy premii; STANYUKOVICH, K.P., professor, doktor tekhnicheskikh nauk; KHLEVTSEVICH, Yu.S., kandidat tekhnicheskikh nauk; SHTERNFEL'D, A.A., laureat mezhdunarodnoy pooshchritel'noy premii po astronavtike.

Enroute to the stars. Tekh.mol. 22 no.7:1-7 Jl '54.

1. Predsedatel' sektsii astronavtiki pri TSentral'nom aeroklube SSSR imeni Chkalova (for Varvarov). 2. Zamestitel' predsedatelia nauchno-tekhnicheskogo komiteta po kosmicheskoy navigatsii, sektsiia astronavtiki (for Dobronravov). 3. Predsedatel' nauchno-tekhnicheskogo komiteta po raketnoy tekhnike, sektsiia astronavtiki (for Merkulov). 4. Predsedatel' nauchno-tekhnicheskogo komiteta po biologii kosmicheskogo poleta, sektsiia astronavtiki (for Seryapin). 5. Chlen nauchno-tekhnicheskogo komiteta po astronomicheskim i fizicheskim problemam (for Stanyukovich), sektsiia astronavtiki. 6. Predsedatel' nauchno-tekhnicheskogo komiteta po radio-teleupravleniyu (for Khlebtsevich), sektsiia astronavtiki. 7. Predsedatel' nauchno-tekhnicheskogo komiteta po kosmicheskoy navigatsii (for Shternfel'd), sektsiia astronavtiki.
(Interplanetary voyages) (Space ships) (MLRA 7:6)

Translation 9006302-V, in Branch #1

PHASE I BOOK EXPLOITATION

Khlebtsevich, Yuriy Sergeyevich, Candidate of Technical Sciences, Chairman of the Scientific and Technical Committee on Radio-controlled Cosmic Rockets of the Central Aeroclub im. Chkalov

Radioteleupravleniye kosmicheskimi raketami (Radio-controlled Cosmic Rockets) Moscow, Izd-vo "Znaniye," 1955. 30 p. (Vsesoyuznoye obshchestvo po rasprostraneniyu politicheskikh i nauchnykh znaniy. Seriya IV, 1955, Nr. 39) 72,000 copies printed.

Ed.: Moroz, I. I.; Tech. Ed.: Islent'yeva, P. G.

PURPOSE: This booklet is written to acquaint the general public with the problems and prospects of cosmic navigation.

COVERAGE: In popular form the booklet describes the preparation underway in the USSR and elsewhere at the time of writing (1955) for the purpose of realizing cosmic travel. The flights of automatic radio-controlled cosmic rockets without crews are described as the first stage in this direction. Stress is laid on the role in this connection of radar, television, and devices for the investigation of the possible danger from meteors. The design of the cosmic laboratory to be established on the artificial satellites is outlined. Mention is made of the use of

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animals in cosmic rockets. The author believes that the conquest of the Moon by man will be achieved within the next 5-10 years, and that man will then make preparations for the conquest of the other planets of the solar system. He prophesies that in 1960-1965 a manned scientific station will be in permanent operation on the Moon and that the first investigations of Mars and Venus will be realized in 1965-1970. Nesmeyanov, A. N., President of the Academy of Sciences, USSR, is mentioned as having stated in 1953 that science had reached the stage when the sending of a stratoplane to the Moon had become a realizable possibility. Soviet scientists Academician Sedov, L. I., and Ogorodnikov, K. F., are mentioned as participants in the VI International Congress of Astronautical Societies (Copenhagen, 1955), where the former stated that in the next two years it would be possible to launch an earth satellite. There are 16 references, all Soviet.

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AVAILABLE: Library of Congress

JJP/aak
June 2,1958

Card 2/2

Name : KHLEBTSEVICH, Yu. S.

Title : Candidate of Technical Sciences

Remarks: Khlebtsevich is one of the authors of the articles appearing in "Flight to the Moon", Moskva, 1955, portraying a fictitious flight to the moon.

Source : M: Polet na Lunu (Flight to the Moon), by various authors, Moskva, 1955

KHLEBTSEVICH, Yu.S. Bach. Tech. Sci.

"Radio9Controlled Cosmic Rockets," Radio, No.5, p.17, 1955

Summary translation D 322221, 21 Sep 55

KHLEBTSEVICH, Yu. S

"En fusee radioguidee vers la Lune" (By radioguided rocket to the moon), Etudes Sovietiques (Paris), Vol 8, No. 89, August, 1955, pp. 65-68.

KHLEBTSEVICH, Yu.S., kandidat tekhnicheskikh nauk.

A path to the cosmos. Nauka i zhizn' 22.no.11:33-37 N '55.(MLRA 9:1)

1.Predsedatel' nauchno-tekhnicheskogo komiteta po radioteleupravleniyu sektsii astronavtiki pri TSentral'nom aeroklube SSSR imeni V.P.Chkalova.
(Interplanetary voyages)

Translation 9006302-V in Branch #5

KHLEBTSEVICH, Yu.S., kandidat tekhnicheskikh nauk.

[redacted]

Earth-Mars. IUn.tekh.no.1:34 S '56. (MIRA 10:3)

(Space stations)

(Mars (Planet))

KHLEBTSEVICH, Yu., kandidat tekhnicheskikh nauk.

The road to the Moon is free. Tekh.mol. 24 no.5:33-35 My '56.
(MLRA 9:8)

(Interplanetary voyages)

KHLEBTSEVICH, Yu. S.

"'Tank' laboratories on the moon," Soviet Weekly (London), No. 738, March 22, 1956, p. 7.

KHLEBTSEVICH, YU. S.

V/8
604
.18

Iskusstvennyy sputnik zemli (Materialy seminara po Amerikanskomu proyektu "Avangard") (Artificial satellites) Perevod s angliyskogo. Pod red. Yu. S. Khlebtsevicha. Moskva, "Sovetskoye Radio", 1957.

74 p. illus., diagrs., tables (Radioelektronika za Rubezhom)

KHLEBTSEVICH, Yu., kandidat tekhnicheskikh nauk.

Communications intensify the cooperation of nations. IUn.tekh. no.7:5-9 Je '57. (MLRA 10:7)

(Telecommunications)

KHLEBTSEVICH, Yu. S.

25-8-34/42

AUTHOR: Khlebtsevich, Yu.S., Candidate of Technical Sciences

TITLE: A Flight to Venus (Polet na Veneru)

PERIODICAL: Nauka i Zhizn', 1957, # 8, pp 53-56 (USSR)

ABSTRACT: Today, flights to other planets are no longer only dreams. To avoid human sacrifices the first space ships will not have crews, at the same time keeping the weight as low as possible. Moreover these space ships need not return to the Earth, but will be equipped with radio and television transmitters which will enable scientists to follow the flight on a screen registering all observations.

An expedition to the Venus would be especially difficult, as the dimension and the gravitational pull of Venus is almost the same as that of Earth. In order to overcome the gravitational pull of the Earth, take-off weight of 100 tons would be required to lift a useful load of one ton. Thus, a new engine consuming less fuel is required before a manned space ship can be launched. However, taking the present stage of technical development as a basis, it seems possible in the near future to send cosmic rockets equipped with television and radio devices to Venus. Such a three stage

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A Flight to Venus

25-8-34/42

rocket would have a weight of 50 tons and, after having overcome the Earth gravitation, it would follow a special path around the Earth on a fixed orbit with a radius of 42,188 km. To keep the weight as low as possible, refueling rockets would supply the necessary fuel every 24 hours. The rocket would move in this orbit with a speed of 3.07 km/sec, until it leaves the orbit and moves toward Venus, at which time, by radio control from Earth, the speed would be increased by 1.95 km/sec.

After a journey of about 145 days, the rocket would have approached Venus up to 300,000 km, a point from which valuable information concerning the conditions of this planet could be reported to the Earth by radio and television equipment. Transmitting television images over a distance of 100 million km would be possible by installing a considerable number of antennas with great amplifications, the transmitted images being recorded on magnetic tapes. After going through electronic computers, these images, free from impurities, would then be recorded on photo-paper. This new method of "cosmic television" would provide a possibility of exploring the secrets of those planets at a still greater

Card 2/3

A Flight to Venus

25-8-34/42

distance from the Earth.
There are five sketches.

AVAILABLE: Library of Congress

Card 3/3

KHLEBTSEVICH, YU. S.

TOKAREV, F.V., izobretatel', Geroy Sotsialisticheskogo Truda; SMIRNOV, I.V., izobretatel' v oblasti stroymaterialov; POKROVSKIY, G.I., professor, doktor tekhnicheskikh nauk; SHIRKOV, I.P., novator stroitel'noy industrii; CHIKIREV, N.S., novator; KOTOVA, S.A., novator, brigadir pryadil'shchits; LOGIN, M.I., izobretatel', inzhener; SLIVOCHKIN, F.P., ratsionalizator; MERKULOV, I.A., izobretatel', konstruktor dvigateley; KOSMATOV, N.V., izobretatel' v oblasti kino; KHLEBTSEVICH, Yu.S., izobretatel', kandidat tekhnicheskikh nauk; SHCHADILOV, V.I., ratsionalizator-naladchik.

"Inventor" has a pround ring to it! Tekh. mol. 25 no.3:1-3 Mr '57.
(MIRA 10:6)

1. Deputat Verkhovnogo Soveta SSSR (for Shirkov). 2. Nachal'nik tsekha zavoda imeni Sergo Ordzhonikidze (for Chikirev). 3. Fabrika imeni Kalinina (for Kotova). 4. Termitnostrelochnyy zavod (for Login). 5. Zavod "Kauchuk" (for Slivochkin).
(Inventions)

KHLEBTSEVICH, Yu., kandidat tekhnicheskikh nauk.

[redacted]

Crew of the interplanetary airship remains on the earth. Znan.-sila
32 no.2:27-28 F '57. (MLRA 10:5)
(Interplanetary voyages)

KHLEBTSEVICH, Yu.S., kandidat tekhnicheskikh nauk.

[redacted]

Secrets of Venus will be revealed. Znan. sila 32 no.7:20 Jl '57.
(Interplanetary voyages) (Venus (Planet)) (MIRA 10:8)

KHLEBTSEVICH, YU.S.

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PHASE I BOOK EXPLOITATION SOV/5494

Vasil'yev, Mikhail Vasil'yevich, and Sergey Zakharovich Gushchev

Reportazh iz XXI veka; my zapisali rasskazy dvadtsati devyati sovetskikh uchenykh o nauke i tekhnike budushchego (Reports From the Twenty-First Century; Stories of Twenty-Nine Soviet Scientists on Science and Engineering of the Future) [Moscow] Izd-vo Sovetskaya Rossiya, 1958. 243 p. 50,000 copies printed.

Ed.: V. A. Golubkova; Tech. Ed.: G. I. Kleyeva.

PURPOSE : This book is intended for the general reader.

COVERAGE: The book contains 27 articles (told reporters by Soviet scientists) dealing with probable future progress in ~~physics~~, ~~chemistry~~, electricity, metallurgy, engineering, mining, medicine, biology, agriculture, zoology, transportation, exploration of space, and photography. Attention is given to automation, automatic underground gasification of coal, use of new metals, modernization of oil fields, atomic electric stations, production of metal parts by the process of explosion, explosions

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Reports From the Twenty-First (Cont.) SOV/5494

in dam construction, cancer, internal longevity reserves, machine diagnoses of illnesses, surgery vs. treatment by ultrasonic vibrations, mechanical heart substitutes, human body banks, "medical engineering," enriched fodder, "superfertilizers", artificial snowfalls, agriculture vs. "mariculture", radiochemistry, power beam vs. wire, machines doing intellectual work, "HF automobiles" (with "radio motors"), "artificial sun" (electromagnetic rays focused above a city which cause heated molecules to shine), future ocean ships, "railway dreadnoughts", Moscow of the future, moving pavements, wheelless and driverless automobiles, electric cameras, the industrialization of Siberia, use of underground heat, climate control, living on the moon, antimatter, and photon jet. Names of the interviewed scientists are given. There are no references.

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AVAILABLE: Library of Congress

Card 7/7

AC/dfk/jw
10-9-61

4-58-6-10/37

AUTHOR: Khlebtsevich, Yu., Candidate of Technical Sciences

TITLE: Subjugator of Space (Pokoritel' prostranstva)

PERIODICAL: Znaniye - sila, 1958, Nr 6, pp 8-9 (USSR)

ABSTRACT: On USSR territory, 12-15 different television zones are proposed which would contain several television centers connected by radio relay lines. Each zone would have its space relay station working on a certain wavelength. Each relay station has two antennas, the receiving antenna and the transmitting antenna which is parabolic and folded. When working, the antenna opens like an umbrella and is directed towards the corresponding zone. The relay station would contain receiving and transmitting apparatus, a solar battery, a small storage battery, an electric stabilizer and devices for radio control from Earth. (Weight - not exceeding 100 kg). The author presents a detailed description of the television system proposed by him and expresses his hope that the next 5-year plan will mark the introduction of television relay satellites.
There are 4 drawings.

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Subjugator of Space 4-58-6-10/37

1. Television--Applications 2. Television equipment--Satellite mounted--Theory 3. Satellite vehicles--Applications--Theory 4. Television relay systems--Theory

Card 2/2

KHLEBTSEVICH, Yu., kand.tekhn.nauk

Seventh continent. Znan.sila 33 no.12:7 D '58. (MIRA 11:12)
(Space flight to the moon)

KHLEBTSEVICH, Yu.S., kand.tekhn.nauk

The train does not stop. Znan.-sila 38 no.5:47-49 My '63.
(MIRA 16:11)

ZORABYAN, A.; KHLEBUNOVA, Ye.

Work days of the scientific technical society. Prom.Arm. 4 no.6:64-66 Je '61. (MIRA 14:8)

(Armenia--Technical societies)
(Armenia--Food industry)

KHLEBUNOVA, Ye.

Honorary efficiency promoter. Prom.Arm. 5 no.4:47-48 Ap '62.
(MIRA 15:5)

(Armenia--Women as inventors)

L 41775-65 EWT(1)/EPF(c)/EPF(n)-2/EWG(m)/EPR Pr-4/Ps-4/Pu-4 WW

ACCESSION NR: AP5005757 S/0170/65/008/001/0003/0006

33

AUTHOR: Khlebutin, G. N.; Shaydurov, G. F.

32

B

TITLE: Thermal convection in a vertical annular tube

SOURCE: Inzhenerno-fizicheskiy zhurnal, v. 8, no. 1, 1965, 3-6

21

TOPIC TAGS: heat convection, heat exchange, convective flow, Nusselt number, Rayleigh number

ABSTRACT: The authors consider convective liquid flow in a vertical annular tube heated from below. Such tubes are frequently used in heat-exchange apparatus and are therefore of appreciable interest. Two models were tested, made of glass or celluloid and filled with distilled freshly boiled water or gasoline (B-70). The tubes were heated from below with a coil fed from a stabilized source, and cooled from above with a thermostatically controlled refrigerating unit. Qualitative visual and photographic investigations have shown that when the heater is located exactly at the bottom of the tube, two types of liquid motion can exist either separately or simultaneously: circular motion, the direction of which is determined by random factors, and cellular motion, in which the heated liquid flows

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ACCESSION NR: AP5009757

of the heated area to the right and to the left in unequal streams. The ratio of cellular to circular motion varies with the angle at which the heater is placed. The experiments have also shown that the temperatures of the left and right sides of the annular tube are approximately constant. Assuming constant temperature and essentially circular motion of the liquid, expressions are obtained for the velocity profile, the mass flow rate of the liquid, and for the heat flux. The Nusselt number is found to be proportional to the Rayleigh number ($\overline{Nu} = 0.125$ Ra), in agreement with other experiments made at Ra < 16,000. Orig. art. has: 2 figures, 3 formulas, and 1 table.

ASSOCIATION: Gosudarstvennyy universitet im. A. M. Gor'kogo, Perm' (Perm' State University)

SUBMITTED: 04May64 ENCL: 00 SUB CODE: TD, ME

NR REF SOV: 002 OTHER: 000

am

Card 2/2

ACC NR: AP7003259 (N)

SOURCE CODE: UR/0207/66/000/006/0103/0104

AUTHOR: Sorokin, M. P. (Perm'); Khlebutin, G. N. (Perm'); Shaydurov, G. F. (Perm')

ORG: none

TITLE: Stability of fluid flow between two rotating spherical surfaces

SOURCE: Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, no. 6, 1966, 103-104

TOPIC TAGS: fluid flow, flow stability, boundary layer flow

ABSTRACT: In 1961 it was found that the flow of liquid between two concentric spheres, the inner one in motion and the external one fixed, becomes unstable at the sphere radius ratio $r_2/r_1 = 2$ with a Reynolds number of about 100 ($R = r_1^2\ \omega/v$, where ω is the angular velocity of the rotating sphere and v is kinematic viscosity of the liquid). The solution was sought in powers of the Reynolds number; since the applicability of this method when R is approximately 100 is not obvious, an experiment was set up to test the theory. A special device was constructed with an inner sphere of steel, an external sphere of organic glass, and water or commercially pure glycerine as the fluid. Very precise measurements are possible. Observations showed that there was no qualitative difference in fluid flow at all Reynolds numbers studied from the flow previously found in the second approximation. Considerably less intense motion in the meridian plane is imposed on the circular horizontal motion, i.e., on

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ACC NR: AP7003259

the inner sphere the fluid flows from the poles to the equator, and in the other direction on the outer sphere. At high values of ω the colored fluid envelopes the surfaces of both spheres in a thin layer; formation of a boundary layer may be assumed. The experiments disclosed no phenomena indicating impaired stability of liquid flow. In the Reynolds number range where impaired stability was expected according to Yu. K. Bratukhin (PMM, vol.25, No. 1, 1961) there is smooth, noncritical transition from the patterns characteristic of slow flows to those of the boundary layer. The results obtained may be of value for viscosimetry. Orig. art. has: 2 formulas and 2 figures.

SUB CODE: 20/ SUBM DATE: 06Aug65/ ORIG REF: 005/ OTH REF: 002

Card 2/2

18 8200

25448
S/137/61/000/006/080/092
A006/A101

AUTHORS: Vereshchagin, I.F., Muryleva, L.K., Khlebutin, G.S.

TITLE: Changes in the mechanical properties of low-carbon steel during torsion

PERIODICAL: Referativnyy zhurnal. Metallurgiya, no. 6, 1961, 5-6, abstract 6I35 ("Uch. zap. Permsk. un-t", v. 17, no. 3, 27 - 34)

TEXT: Since 1955 the authors have studied the effect of residual stresses on the mechanical properties of metals. An attempt of using off-center tension in order to strengthen the marginal threads of the specimen, did not yield satisfactory results, due to the impossibility of determining experimentally the range and degree of plastic deformation. In 1956 the authors used deformation by torsion in order to strengthen the metal. Plastic torsion of round specimens was carried out on a AM-1 type torsion test machine. The specimens were made of CT.0 (St.0) grade steel of the following composition (in %): C 0.1, Si 0.17, Mn 0.35, P 0.014, S 0.025, Cr 0.02, Ni 0.1. Reduction of the metal in the cross section of the specimen takes place corresponding to the developing plastic deformation during the torsion of the specimen. The magnitude of reduction is the

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25448

Changes in the mechanical properties ... S/137/61/000/006/080/092
A006/A101

greater, the larger the torsion angle. This reduction entails uniform extrusion and homogeneous flow of the specimen metal. At such a homogeneous plastic metal flow, a field of residual normal stresses can not develop in the cross section after unloading of the specimen. The authors analyze the problems of raising the steel strength during torsion for the case when the pre-operational cold hardening does not coincide with the direction of the operational load. It was established that cold hardening by plastic torsion raised the shearing strength of ЭЯ2(EYa2) steel to a lesser degree than preliminary cold hardening by tension, compression and drawing.

T. Rumyantseva

[Abstracter's note: Complete translation]

Card 2/2

VERESHCHAGIN, I. F.; MUIKYLEVA, L. K.; KHLEBUTIN, G. S.

Effect of the temperature of relaxation on mechanical properties of plastically twisted low-carbon steel. Uch.zap.Perm.gos.un. 17 no.3:35-42 '60. (MIRA 14:11)

(Steel--Testing)

SOV/124-58-1-1094

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 1, p 143 (USSR)

AUTHOR: Khlebutin, N. V.

TITLE: Local Stresses in Thin-walled Beams (Mestnyye napryazheniya v tonkostennykh balkakh)

PERIODICAL: Tr. Khar'kovsk. aviats. in-ta, 1955, Nr 16, pp 79-91

ABSTRACT: The author employs Yu. G. Odinokov's method (Tr. Kazansk. aviats. in-ta, 1946, Vol 18), to set up differential equations for a thin-walled stiffened beam having a singly-closed section which is subjected to the action of local forces. These equations are obtained in the analysis of the equilibrium of a segment of a beam stringer under longitudinal forces; their definitive form is as follows:

$$G\sum_k a_{ik} w_k - EF_i \ddot{w}_i = R_i \quad (i = 1, \ldots, n)$$

where a_{ik} is a third-order determinant, the coefficients of which depend on the geometrical characteristics of the section; R_i is an analogous determinant the coefficients of which depend on the forces applied also; F_i is the area of the stringer section; w is the

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Local Stresses in Thin-walled Beams SOV/124-58-1-1094

deflection of the beam; E is the modulus of elasticity; G is the shear modulus. The integration of this system reduces to the solution of systems of algebraic equations of the type

$$\sum_k a_{ik} h_k - \frac{E}{G} F_i \lambda^2 h_i = 0 \qquad (i=1, \ldots, n)$$

and to the findings of particular solutions and arbitrary constants. In order to determine the unknowns h new variable ϕ_μ are introduced; these are related to the previously used variables w_i through the linear relationships

$$\phi_\mu = E \sum_{i=1}^{n} F_i h_i^{(\mu)} w_i \qquad (\mu=1, \ldots, n)$$

The variables ϕ_μ constitute normal coordinates, if $h_i^{(\mu)}$ are the solutions of the system. In terms of the new variables ϕ_μ the system of n simultaneous equations can be transformed into a system of n separate equations of the type

$$\ddot{\phi}_\mu - \lambda^2 \phi_\mu = \psi_\mu(z) \qquad (\mu=1, \ldots, n)$$

where λ is the root of the characteristic equation of the system of simultaneous

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equations; μ is the number of the root; $h_i^{(\mu)}$ $(i=1,\ldots,n)$ is the aggregate of the solutions of the system for the μ-th root; ψ_μ is a function of the generalized geometrical characteristics of the section and of the forces acting on the section. The solution of these equations yields the values of ϕ, which in turn yield those of ψ and of the unknown stresses. It is shown that the function ϕ has the aspect of a force factor, somewhat like the bending moment of deviation in open-profile section; it is designated in the paper examined as a polymoment with respect to the number of the function. A numerical example of the calculation of a four-stringer box beam is adduced.

I. L. Kats

Card 3/3

SOV/124-57-5-6065

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 5, p 148 (USSR)

AUTHOR: Khlebutin, N. V.

TITLE: On the Shear Stresses in Thin-walled Closed-section Beams in Restrained Torsion (O kasatel'nykh napryazheniyakh pri stesnennom kruchenii tonkostennykh balok zamknutogo profilya)

PERIODICAL: Tr. Khar'kovsk. aviats. in-ta, 1955, Nr 16, pp 93-108

ABSTRACT: In the A. A. Umanskiy theory of the restrained torsion of closed cylindrical thin-walled shells (Tekhnika vozd. flota, 1940, Nr 12) one is confronted with two different types of approximate expression for the shear stresses, between which correspondence is achieved only in an integral sense. Of those two types of expression one is evolved on the basis of the particular type or state of equilibrium assumed for the shell walls; the other is evolved on the basis of the strain-distribution pattern assumed to obtain in a cylindrical shell [in this connection, see Dzhanelidze, G. Yu., Panovko, Ya.G. 'Statika uprugikh tonkostennykh sterzhney (The Statics of Flexible Thin-walled Beams). Gosstroyizdat, 1948, p 124]. The author of the present paper, using the Lagrangian variational principle, evolves the basic Umanskiy

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SOV/124-57-5-6065

On the Shear Stresses in Thin-walled Closed-section Beams in Restrained Torsion

formulas without using at all the first of the mentioned two types of expression, and he suggests that for all practical purposes only the secon--named type be used, since of the two that, as the author states, is the more precise. It might be added that a similar treatment of the Umanskiy theory appears in a paper published earlier by the reviewer [see Primeneniye variatsionnykh metodov k raschetu obolochek kryla i fyuzelyazha samoleta (Use of Variational Methods in the Analysis of Aircraft-wing and -fuselage Shells). Avtoref. diss. kand. tekhn. n., 1952, VVIA im. Zhukovskogo].

V. V. Novitskiy

Card 2/2

124-58-9-10481

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 9, p 151 (USSR)

AUTHOR: Khlebutin, N. V.

TITLE: Calculation of Fixed Thin-walled Girders With Open Profile (Raschet tonkostennykh pokreplennykh balok otkrytogo profilya)

PERIODICAL: Tr. Khar'kovsk. aviats. in-ta, 1957, Nr 17, pp 225-246

ABSTRACT: The problem of the complex strength of beams is examined by the method of Yu. G. Odinokov (Tr. Kazansk. aviats. in-t, 1946, Vol 18). The calculation model consists of a thin-walled beam with open profile with an invariable cross-sectional contour, consisting of longitudinal stringers and connecting shear panels. It is assumed that the stringers are stressed in tension only, while the panels are subjected to pure shear. The solution and analysis of the equations set up by Odinokov for the stresses and strains of the beam are given. A comparison is provided relative to the solution of the same problem by V. Z. Vlasov's method [Tonkostennye uprugiye sterzhni (Thin-walled elastic beams). Gosstroyizdat, 1940] in which the shear strain of the middle surface of the beam was not taken into consideration. It is shown that V. Z. Vlasov's solution

Card 1/2

124-58-9-10481

Calculation of Fixed Thin-walled Girders With Open Profile

requires the additional superimposition of a selfbalancing system of stresses or strains corresponding thereto.

Yu. D. Kopeykin

1. Beams--Mechanical properties 2. Beams--Mathematical analysis

Card 2/2

ACCESSION NR: AT4039443 S/2879/64/000/000/0953/0958

AUTHOR: Khlebutin, N. V. (Moscow)

TITLE: The use of electronic digital computers for strength calculations of thin-walled aviation structure

SOURCE: Vsesoyuznaya konferentsiya po teorii obolochek i plastin. 4th, Yerevan, 1962. Teoriya obolochek i plastin (Theory of plates and films); trudy* konferentsii, 1964, 953-958

TOPIC TAGS: shell, thin walled structure, reinforced shell, aircraft design, shell strength, strength calculation, computer, digital computer, thin walled rod

ABSTRACT: The author notes that an aircraft structure is normally designed in the form of a reinforced shell. Its surface is complex in form, while the thickness of the shell and the dimensions of its reinforcing ribs are variable. Mechanization of individual calculation operations by means of high-speed digital computers is not always effective because of the great expenditure of work required for the preparation of the basic data and the analysis of the intermediate computational results. Thus, overall mechanization and automation of structural computation work acquires particular importance. In the present article, an attempt is made to outline, in the first approximation, a methodology for the overall

Card 1/2

KHLEBUTIN, Ye.V., kand.ekon.nauk

Methods of calculating labor productivity in agriculture.
Izv.TSKhA no.4:197-204 '59. (MIRA 12:11)
(Agriculture--Labor productivity)

KHLEBUTINA, T.A.

Mobility of basic neural processes in signaling systems during functional loads of various complexities. Zhur. vys. nerv. deiat. 12 no.4:587-592 Jl-Ag '62.

(MIRA 17:11)

1. Laboratory of Physiology of Higher Nervous Activity, Ukrainian Psychoneurological Research Institute, Khar'kov.

KHIEBUTINA, T.A. [Khliebutina, T.O.]

Mobility of nervous processes in the signal systems of healthy persons and schizophrenia patients. Fiziol. zhur. [ukr.] 8 no.4:463-466 Jl-Ag '62. (MIRA 18:4)

1. Laboratoriya fiziologii vysshey nervnoy deyatel'nosti Ukrainskogo nauchno-issledovatel'skogo psikhonevrologicheskogo instituta, Khar'kov.

KHLEMENDIK, M.D. (Dneprodzerzhinsk, Dnepropetrovskoy obl., Tagil'skaya
ul., d.12. kv.32)

Traumatism in the Dzerzhinskii Metallurgical Plant. Ortop. travm. protez. 24 no.7:44-47 Jl'63 (MIRA 17:2)

1. Iz kafedry organizatsii zdravookhraneniya (zav. - dotsent G.F.Yemel'yanova) Dnepropetrovskogo meditsinskogo instituta i mediko-sanitarnoy chasti (glavnyy vrach - V.I.Ryazantsev) zavoda imeni F.E.Dzerzhinskogo.

TKHORZHEVSKIY, Vladislav Pavlovich; **PEREVEZENTSEV**, Ivan Gavrilovich;
KUZIN, M.D., retsenzent; **KHLEPETIN**, Yu.M., red.; **DUGINA**, N.A.,
tekhn.red.

[Manufacture of instruments for tropical countries] Konstruirovanie priborov dlia stran s tropicheskim klimatom. Moskva, Gos. nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1960. 153 p.
(MIRA 13:10)
(Instrument manufacture)

NEVSTRUYEVA, Ye.I., kand. tekhn. nauk; KHLESTKIN, D.A., inzh.

Experimental system for studying nonstationary processes in steam generating pipes. Trudy MEI no.63:163-172 '65. (MIRA 18:12)

BIKKULOV, A.Z.; KHLESTKIN, R.N.; GROSHEV, B.M.; KHAMAYEV, V.Kh.;
ZARIPOV, A.G.

Use of petroleum toluene to obtain terephthalic acid. Nefteper. i neftekhim. no.8:33-35 '63. (MIRA 17:8)

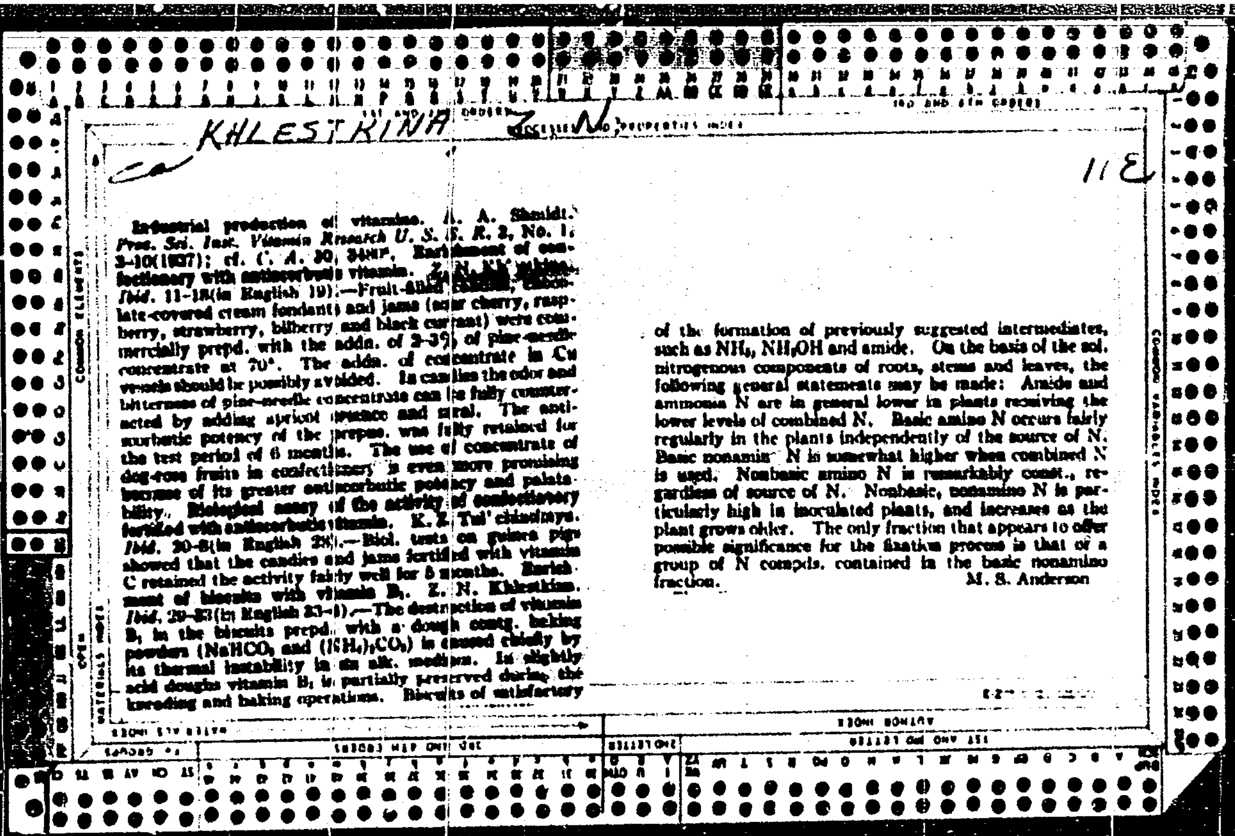
1. Ufimiskiy neftyanoy institut.

KHLESTKIN, V.

KHLESTKIN,V., inzhener

New design for guy wire loops. Stroi.mat., izdel. i konstr. 1 no.7:
26 Jl '55. (MLRA 8:11)

(Concrete slabs)



KHLESTKINA Z. N.

ca

11E

Industrial production of vitamins. A. A. Shmidt. *Proc. Sci. Inst. Vitamin Research U. S. S. R.* 2, No. 1, 3-10(1937); cf. C. A. 30, 3488. Enrichment of confectionery with antiscorbutic vitamin. Z. N. Khlestkina. *Ibid.* 11-18(in English 19).—Fruit-filled candies, chocolate-covered cream fondants and jams (sour cherry, raspberry, strawberry, bilberry and black currant) were commercially prepd. with the addn. of 2-3% of pine-needle concentrate at 70°. The addn. of concentrate in Cu vessels should be possibly avoided. In candies the odor and bitterness of pine-needle concentrate can be fully counteracted by adding apricot essence and citral. The antiscorbutic potency of the prepns. was fully retained for the test period of 6 months. The use of concentrate of dog-rose fruits in confectionery is even more promising because of its greater antiscorbutic potency and palatability. Biological assay of the activity of confectionery fortified with antiscorbutic vitamin. K. Z. Tul'chinskaya. *Ibid.* 20-8(in English 28).—Biol. tests on guinea pigs showed that the candies and jams fortified with vitamin C retained the activity fairly well for 5 months. Enrichment of biscuits with vitamin B_1. Z. N. Khlestkina. *Ibid.* 29-33(in English 33-4).—The destruction of vitamin B_1 in the biscuits prepd. with a dough contg. baking powders ($NaHCO_3$ and $(NH_4)_2CO_3$) is caused chiefly by its thermal instability in an alk. medium. In slightly acid doughs vitamin B_1 is partially preserved during the kneading and baking operations. Biscuits of satisfactory

of the formation of previously suggested intermediates, such as NH_3, NH_2OH and amide. On the basis of the sol. nitrogenous components of roots, stems and leaves, the following general statements may be made: Amide and ammonia N are in general lower in plants receiving the lower levels of combined N. Basic amino N occurs fairly regularly in the plants independently of the source of N. Basic nonamino N is somewhat higher when combined N is used. Nonbasic amino N is remarkably const., regardless of source of N. Nonbasic, nonamino N is particularly high in inoculated plants, and increases as the plant grows older. The only fraction that appears to offer possible significance for the fixation process is that of a group of N compds. contained in the basic nonamino fraction.

M. S. Anderson

KHLESTKOV, I.

RADIO, SHORT WAVE

Sixth ALL-Union radio-telegraph short wave competitions of the Volunteer Society for Assistance to the Army, Navy, and Aviation. Radio 22 no. 6, 1952.

9. Monthly List of Russian Accessions, Library of Congress, August 1952 1953, Uncl.

KHLESTKOV, I.

"The fourth All-Union wireless telephone competitions between the hams of Moscow."

So. Radio, Vol. 3, p. 21, 1952

KHLESTKOV, I.

"Sixth series of All-Union wireless telegraphy competitions among short-wave radio amateurs of the Dosaaf."

So. Radio, Vol. 6, p. 36, 1952

KHLESTKOV, I.

Radio, Short Wave

Fourth radio-telegraph contest of short wave operators of the city of Moscow. Radio, 29, No. 3, 1952.

9. Monthly List of Russian Accessions, Library of Congress, June 1952 195~~3~~, Uncl.

KHLESTKOV, I.

Radio, Short-Wave

Ultrashort-wave operators of the Moscow municipal radio club of the All-Union Voluntary Society for Assistance to the A my, Aviation and Navy. Radio No. 3, 1953.

Monthly List of Russian Accessions, Library of Congress, June 1953. Uncl.

KHLESTKOV, I., master radiolyubitel'skogo sporta.

Work of shortwave monitor operators in competitions. Radio no.4: 23-24 Ap '56. (MLRA 9:7)

1.Chempion Dobrovol'nogo obshchestva sodeystviya armii, aviatsii i flotu SSSR 1855 goda po radiopriyomu.
(Radio, Shortwave)

KHLESTKOV, I.

Information by telephone. Radio no.7:21-22,24 Jl '63.
(MIRA 16:7)
(Information storage and retrieval systems)

KHLESTOV, O. N.; GUSEV, N. G.; and FEDOROV, A. F.

(2)

"Observations on the Program of Drafting a Convention to Govern the Disposal of Radioactive Waste into the Sea."

report presented at the IAEA Panel Meeting on Radioactivity in the Marine Environment Vienna, 21-23 Nov 1962.

L 13341-63 EWP(q)/EWT(m)/BDS AFFTC/ASD JD/JG

ACCESSION NR: AP3002901 S/0148/63/000/006/0138/0142

AUTHOR: Zubarev, V. V.; Khlestov, V. M.

57
56

TITLE: Effect of zirconium on the temper of alloyed structural steel

SOURCE: IVUZ. Chernaya metallurgiya, no. 6, 1963, 138-142

TOPIC TAGS: zirconium, alloyed structural steel, 35KhG steel, 35KhGTs steel

ABSTRACT: Authors studied the effect of zirconium on the temper of alloyed structural steel. 35KhG and 35KhGTs steels were used for the tests. Authors found that zirconium retards the third transformation during tempering. The termination of transformation is shifted towards higher temperatures by 25 - 30C after hardening with 860C. The shift is 40 - 50C after hardening with 1300C, the residual austenite in zirconium steels is much more stable and its decomposition temperature is 20 to 30C higher than in steels not containing zirconium. After hardening with 860C, decomposition of the residual austenite was not observed. Under the effect of zirconium, the hardness of the steels during tempering is reduced more slowly in the temperature interval of the third transformation. The effect of zirconium on the temper of steel can be explained by its solubility in austenite during the process of heating and exposure of the steel under hardening. Orig. art. has:

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L 13341-63

ACCESSION NR: AP3002901

2 figures and 1 table.

ASSOCIATION: Zhdanovskiy metallurgicheskiy institut (Zhdanov Metallurgical Institute)

SUBMITTED: 25Jul62 DATE ACQ: 24Jul63 ENCL: 00

SUB CODE: 00 NO REF SOV: 005 OTHER: 000

Card 2/2

ZUBAREV, V.F.; KHLESTOV, V.M.

Effect of zirconium on the tempering of alloyed structural steel.
Izv. vys. ucheb. zav.; chern. met. 6 no.6:143-147 '63.
(MIRA 16:8)

1. Zhdanovskiy metallurgicheskiy institut.
(Steel, Structural--Metallurgy) (Tempering)

KHLESTOV, V.M.; ZUBAREV, V.F.; LEONT'YEV, B.A.

Effect of zirconium on the stability of austenite and the hardenability of 35KhG, 35KhGR and 35KhGB steels. Izv. vys. ucheb. zav.; chern. met. 6 no.10:113-119 '63. (MIRA 16:12)

1. Zhdanovskiy metallurgicheskiy institut.

ZUBAREV, V.F.; KHLESTOV, V.M.

Effect of zirconium on the size of an austenite grain during the heating of alloyed structural steel. Izv. vys. ucheb. zav.; chern. met. 6 no.12:141-146 '63.
(MIRA 17:1)

1. Zhdanovskiy metallurgicheskiy institut.

ACCESSION NR: AR4036263 S/0137/64/000/003/I053/I053

SOURCE: Referativny*y zhurnal. Metallurgiya, Abs. 3I313

AUTHOR: Zubarev, V. F.; Khlestov, V. M.

TITLE: Effect of zirconium on the properties of structural alloy steel

CITED SOURCE: Sb. nauchn. tr. Zhdanovsk. metallurg. in-t, vy*p. 11, 1963, 171-178

TOPIC TAGS: zirconium steel, boron steel, zirconium structural steel

TRANSLATION: A study was made of the effect of Zr (up to 0.58%) on the structure, mechanical properties, hardenability, and brittleness at negative temperatures of the steels 35KhG, 35KhGR, 35KhGV, and 35KhGVR. The steel was melted in an electric arc furnace; after deoxidizing with aluminum Zr was introduced in the form of briquets prepared from powders of Fe and Zr. When Zr is introduced into the steel, a considerable refinement of sulfides is observed. No zirconium inclusions were observed in experimental industrial melts containing 0.03% Zr, and the steels were very pure with respect to nonmetallic inclusions. An appreciable increase in the

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L 36131-65 EWT(m)/EWA(d)/T/EWP(t)/EWP(b)/EWA(c) MJW/JD

ACCESSION NR: AR5005688 S/0276/64/000/009/B062/B063

SOURCE: Ref. zh. Tekhnologiya mashinostroyeniya. Svodnyy tom, Abs. 9B386 22 B

AUTHOR: Khlestov, V. M.; Zubarev, V. V.; Leont'yev, B. A.

TITLE: The effect of zirconium on stability of austenite and hardenability of steels 35KhG, 35KhGR and 35KhGV

CITED SOURCE: Sb. Legirovaniye stali, Kiyev, Gostekhizdat USSR, 1963, 80-86

TOPIC TAGS: boron steel, alloy steel, austenite stability, steel hardenability, zirconium alloying, pearlite phase, intermediate phase / 35KhG steel, 35KhGR steel, 35KhGV steel

TRANSLATION: Experimental steels were prepared in an electric arc furnace (capacity 30 kg). Zr in quantities up to 0.58% was fed into the furnace in the form

L 36431-65

ACCESSION NR: AR5005688

0

samples 25 mm long and 3 mm in diameter. Austenizing was carried out at 860C with exposures of 5 min., Sn serving as the isothermic agent. Zr exerted a significant effect on the stability of austenite in 35KhG steel, especially in the pearlite phase. The incubation period of pearlite conversion was prolonged 150 and 300% [illegible] stability of austenite decreased with a effect on the stability [illegible] prolonged 150 and 300% [illegible] phase. The incubation p[illegible] by 0.05 and 0.25% Zr, respectively. The stability of austenite decreased with a further increase in Zr. In the intermediate phase, the stability of austenite increased monotonously as Zr content was increased to 0.58%. The effect of Zr appeared more sharply in steels containing boron. Zr produced a supplemental improvement in the stability of austenite in 35KhGR steel, but the improvement was somewhat less for 35KhGV steel. The hardenability of steels containing Zr exhibited complete conformity to the admixture's effects on the kinetics of isothermal conversion of austenite. The increase in stability of austenite in the pearlite phase is attributed to partial dissolution of Zr in the austenite. The varying intensity of the effects of Zr as its content increased from 0.05 to 0.58% is attributed to varying distribution of the added Zr between the austenite and the carbide phase. The improvement in stability of the austenite and hardenability of 35KhGR boron steel at a low Zr content is attributed to the admixture's

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L 36131-65
ACCESSION NR: AM5005688 0

effect as a deoxidizer and denitrifying agent which tends to increase the active content of boron. An increase in Zr to 0.25% reduced hardenability in boron steels in comparison to steel containing 0.06% Zr. The optimal content of Zr was defined as 0.06 to 0.08% for 35KhG steel. Alloying of 35KhGV steel with 0.09% Zr did not produce a significant improvement in the stability of austenite in the intermediate phase. Bibl. with [illegible] titles; 5 illustrations and 4 tables.
Yu. Avraamov.

SUB CODE: MM ENCL: 00

Card 3/3

ZUBAREV, V.F., doktor tekhn. nauk; KHLESTOV, V.M.

Properties of structural steel on a chromium-manganese base additionally alloyed with tungsten, boron, and zirconium. Met. i gornorud. prom. no.4:24-26 Jl-Ag '64.

(MIRA 18:7)

KHLESTOV, V.V.

Nomogram for determining the optic angle by A.N.Zavaritskii's method. Zap. Vses. min. ob-va 88 no.6:700-701 '59.
(MIRA 13:8)
(Crystals—Optical properties)

SOBOLEV, V.S., akademik; KHLESTOV, V.V.; KEPEZHINSKAS, K.B.

Use of the quartz arrangement for evaluating the temperatures of mineral formation. Dokl. AN SSSR 154 no.6:1355-1358 F '64. (MIRA 17:2)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR.

BELOUSOV, A.F.; DOBRETSOV, N.A.; KOCHKIN, Yu.N.; KRIVENKO, A.P.; KUTOLIN,
V.A.; TELESHEV, A.Ye.; KHLESTOV, V.V.

Experience in the utilization of calculations on electronic computers for the solution of petrochemical and mineralogical problems. Geol. i geofiz. no.6:163-164 '64. (MIRA 18:11)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR, Novosibirsk.

KHLESTOV, V.V.

Garnets of cordierite-containing rocks of the Sharyzhalgay complex (southwestern Lake Baikal region). Dokl. AN SSSR 154 no.4:842-845 F '64. (MIRA 17:3)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR. Predstavleno akademikom V.S. Sobolevym.

KHLESTOV, V.V.; USHAKOVA, Ye.N.

Petrography and genesis of the Kyakhta sillimanite deposit in the Buryat A.S.S.R. Trudy Inst.geol.i geofiz.Sib.otd.AN SSSR no.15:197-241 '63. (MIRA 17:4)

DOBRETSOV, N.L.; REVERDATTO, V.V.; SOBOLEV, V.S.; SOBOLEV, N.V.; USHAKOVA, Ye.N.; KHLESTOV, V.V.

Basic characteristics of the distribution of the facies of regional metamorphism in the U.S.S.R. Geol. i geofiz. no.4: 3-18 '65. (MIRA 18:8)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR, Novosibirsk.

L 14154-66

ACC NR: AP6001315 SOURCE CODE: UR/0248/65/000/009/0037/0040

AUTHOR: Bochkov, N. P.; Antoshchina, M. M.; Bulanov, A. G.; Khlestova, R. A.; Sevan'kayev, A. V.

ORG: Institute of Medical Radiology, AMN SSSR, Obninsk (Institut meditsinskoy radiologii AMN SSSR); Maternity Hospital No. 26, Moscow (Rodil'nyy dom No. 26) 17 B

TITLE: Frequency of spontaneous noncleavage of sex chromosomes in man

SOURCE: AMN SSSR. Vestnik, no. 9, 1965, 37-40

TOPIC TAGS: human genetics, infant disease

ABSTRACT: An examination was made for the presence of sex chromation in cells from newly born girls and boys. No anomalies were found in the girls, while four of the boys had sex chromatin, i. e., Kleinfelter's syndrome. Reexamiation of these four infants 2-6 months later showed a high percentage of cells with sex chromatin. None of the infants' parents had been exposed to ionizing radiation or other injurious factors. Among stillborn infants, 2 of 57 boys and 1 of 46 girls had sex chromosome anomalies. Referring to the frequency of such anomalies in spontaneous abortions

UDC: 576.312.332 : 616-053.1+616.053.1 : 576.312.332

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L 14154-66
ACC NR: AP6001315

reported in the literature, the author suggests that chromosome mutations in man are eliminated at different stages of ontogenesis; the rate of spontaneous noncleavage of chromosomes cannot be accurately determined without examining aborted and still-born infants as well as live-born children. Orig. art. has: 1 figure, 2 tables.

SUB CODE: 06/ SUBM DATE: 05Jun65/ ORIG REF: 009/ OTH REF: 017

Card 2/2 *jo*

KHLEVCHUK, V. R. Cand Tech Sci -- (diss) "Study of the effectiveness of the ~~uti-~~ use ~~lization~~ ceramicite concrete wall designs for the of designs of walls ~~made of porous clay filler and concrete in~~ construction of buildings on railroads ~~tracks~~." Mos, 1959. 13 pp (Mos Order of Lenin and Order of Labor Red Banner Inst of Engineers of Railroad Transport im I. V. Stalin), 170 copies (KL, 52-59, 122)

KHLEVCHUK, V.R., inzh.

Investigating the heat conductivity of keramzit" concrete.
Trudy MIIT no.122:228-237 '59. (MIRA 13:5)
(Lightweight concrete--Thermal properties)

KHLEVCHUK, V.R.; KALYADIN, Yu.A.

Temperature and humidity control in completely prefabricated apartment houses. Gor. khoz. Mosk. 37 no.7:16-18 Jl '63.
(MIRA 16:11)

KHLEVCHUK, V.R., insh.

Insulating properties of walls made of keramzit concrete units.
Trudy MIIT no.122:238-253 '59. (MIRA 13:5)
(Cement--Thermal properties)

FOKIN, K.F., doktor tekhn.nauk; BRILING, R.Ye., kand.tekhn.nauk;
KHLEVCHUK, V.R., kand.tekhn.nauk

Thermotechnical properties of single-core ceramic panels. Stroi.
mat. 9 no.9:27-29 S '63. (MIRA 16:10)

KHLEVNOY, S.S.

AID Nr. 989-12 13 June

EFFECT OF LUMINOUS RADIATION ON BURNING RATE OF NITROGLYCERIN POWDER (USSR)

Kanev, Ye. V., and S. S. Khlevnoy. Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, no. 2, Mar-Apr 1963, 167-169. S/207/63/000/002/022/025

The dependence of burning rate on luminous radiation was investigated by burning nitroglycerin powder specimens

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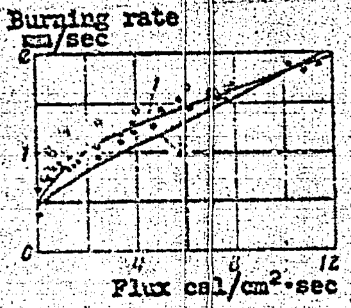
S/207/63/000/002/022/025

EFFECT OF LUMINOUS RADIATION [Cont'd]



○ - glass clad specimens; ◐ - nitrogen blown specimens

1 - present results; 2 - results obtained by Leypunskiy with a similar powder (heating value 870 cal/g)

8 to 10 mm high and 20 mm in diameter at atmospheric pressure. The specimens were subjected to a luminous flux of 12 to 14 cal/cm²· sec generated by means of a step-down voltage transformer with a graphite plate (130 mm x 90 mm) connected to the secondary winding. To obtain a plane flame front, the lateral surfaces of the specimens were clad with organic glass or blown by a longitudinal flow of nitrogen. The specimens were ignited by a high-density luminous flux. Owing to measuring difficulties, absorption of light by combustion products and its reflection from the surface of a burning specimen were neglected. The results obtained are

Card 2/3

AID Nr. 989-12 13 June

EFFECT OF LUMINOUS RADIATION [Cont'd]

S/207/63/000/002/022/025

shown in the illustration, where the abscissa indicates the luminous flux generated by the device (not those absorbed by the powder). The higher burning rates obtained with glass-clad specimens as compared with those blown with nitrogen are a result of three factors: 1) the absence of the cooling effect of nitrogen; 2) the reaction with atmospheric oxygen, which forms a highly radiating flame; and 3) the lower absorption of luminous flux by gaseous combustion products formed between the light source and a specimen as compared with the absorption by the smoke-gas mixture formed in nitrogen atmosphere. It is concluded that the effect of luminous flux on the burning rate of the powder at atmospheric pressure is not entirely thermal. It is possible that the luminous flux not only causes thermal heating of powder, but also has a considerable effect on the kinetics of chemical processes in a combustion zone by increasing the speed of reaction. [AS]

Card 3/3

L 33437-66 EWT(m)/EWP(j)/T IJP(c) DS/WW/JW/JWD/RM

ACC NR: AP6020553 SOURCE CODE: UR/0414/66/000/001/0068/0073

AUTHOR: Aleksandrov, V. V. (Novosibirsk); Konev, E. V. (Novosibirsk); Mikheyev, V. F. (Novosibirsk); Khlevnoy, S. S. (Novosibirsk)

60
56
B

ORG: none

TITLE: Surface temperature of burning nitroglycerine powder

SOURCE: Fizika goreniya i vzryva, no. 1, 1966, 68-73

TOPIC TAGS: nitroglycerine, combustion temperature, solid propellant combustion, combustion research

ABSTRACT: The surface temperature T_s of nitroglycerine powder H burning in air was measured as a function of the initial temperature of the powder T_0 (ranging from -25 to 125C). A thin (~5μ) manganin-constantan thermocouple located between the compressed powder specimen and an ebonite substrate cemented together with acetone was used for the measurements. The tabulated and graphed results show that the surface temperature of the powder is practically independent of the initial powder temperature and varied between 275 ± 21C at T_0 = 20C and 281 ± 11C at T_0 = 116C. The average T_s is about 275C and, apparently, is the boiling temperature of the nitroglycerine and dinitrotoluene

Card 1/2 UDC: 536.46+541.427.6

L 33437-66

ACC NR: AP6020553

4 11

mixtures in the presence of nitrocellulose and decomposition products. Data on the burning velocity of H powder at $T_0 < 20—40C$, calculated on the assumption that T_s is equal to the boiling temperature of the mixture, are in good agreement with published experimental data on the dependence of the burning velocity u on the initial powder temperature in the same temperature range. The results indicate that the evaporation of the volatile components plays a great role in the burning of nitroglycerine powders. To explain the $u(T_0)$ dependence, it is suggested that at $T_0 < 40C$, u is determined by the solid-phase reaction and at $T_0 > 40C$, u is determined by the reaction in the gaseous or in the aerosol phase. The author is grateful to A. A. Koval'skiy for his advice and also to all his coworkers at the Laboratory of the combustion of condensed systems of the Institute of chemical kinetics and combustion, Siberian branch, AN SSSR for their discussion of the work. Orig. art. has: 4 figures, 1 table, and 2 formulas. [PS]

SUB CODE: 19/ SUBM DATE: 15Nov65/ ORIG REF: 008/ OTH REF: 001/
ATD PRESS: 5027

Card 2/2 ULR

L 43982-66 EWT(l)/EWP(e)/EWT(m)/T/EWP(t)/ETI/EWP(k) IJP(c) JD/WW/JWD/JT

ACC NR: AP6029754 (A) SOURCE CODE: UR/0414/66/000/002/0044/0051

AUTHOR: Mikheyev, V. F. (Novosibirsk); Khleynov, S. S. (Novosibirsk); Khudyakov, A. V. (Novosibirsk)

ORG: none

TITLE: A thin film resistance thermometer for recording temperatures on the surface of powder during rapid heating

SOURCE: Fizika goreniya i vzryva, no. 2, 1966, 44-51

TOPIC TAGS: solid propellant, propellant, combustion, solid fuel rocket

ABSTRACT: One of the important characteristics of solid rocket fuel is the change in the surface temperature prior to ignition at various initial conditions and with various types of energy incident on the surface. The study of the ignition process is of greatest interest when the fuel is heated very rapidly (ignition time 10^{-2} sec), which is close to the actual ignition conditions in solid fuel rocket engines. Temperature measurement of the fuel surface has been studied by methods based on the emission of infrared radiation from the surface. This, however, had the shortcoming that the products of evaporation and decomposition affect the measurements. In the present study, a thin film resistance thermometer (0.5 μ thick and 0.2—0.3 mm wide) was prepared and used to measure the surface temperature during rapid heating by light energy. The nickel resistance thermometer was prepared electrolytically

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UDC: 536.46+541.427.6

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ACC NR: AP6029754

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and standardized with a manganese-constant thermocouple at 0—300C. The thermometer was mounted on 20 mm diameter and 7 mm thick fuel samples which were heated by light flux of 12—14 cal/cm^2 sec. Temperature recordings were made with an oscillograph. The heating of a powder H-carbon black mixture took 0.1 to 0.3 sec. The thermometer can be used with energy fluxes of 10—100 cal/cm^2 sec obtained with an arc furnace. This would ensure heating in 10 μsec. The authors thank T. F. Voyevodchenko, V. P. D'yachkov, and M. S. Dumayev for their help in preparing the experiment. Orig. art. has: 8 figures.

[PV]

SUB CODE: 21/ SUBM DATE: 17Nov65/ ORIG REF: 005/ OTH REF: 014/ ATD PRESS: 5071

Card 2/2 ULR

20842

24.3500 (1137, 1138, 1153, 1395)

S/048/61/025/003/031/047
B104/B202

AUTHOR: Khlevnyuk, A. T.

TITLE: On the interaction between the activators in alkali halide phosphors

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, v. 25, no. 3, 1961, 386-388

TEXT: This paper was presented at the 9th conference on luminescence (crystal phosphors), Kiyev, June 20 to 25, 1960. The author studied the effect of the interaction between the activators on the electron trapping centers of the NaCl-$CuCl_2$, $PbCl_2$ phosphors. These studies were made by comparing the thermal deexcitation and the absorption spectra of the singly and doubly activated phosphors which had been subject to X-radiation. If the activators in doubly activated phosphors had equal molecular concentration, thermal deexcitation curves at 40, 58 and 128°C had peaks which are characteristic of NaCl-$CuCl_2$ phosphors. The phosphor NaCl-0.02 mole% $CuCl_2$, 0.02 mole% $PbCl_2$ is given as an example. However, the peak at 220°C which

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is characteristic of an $NaCl-CuCl_2$ phosphor does not occur in doubly activated phosphors. Besides, the light sum of a doubly activated phosphor is lower than that of singly activated $NaCl-CuCl_2$ phosphor. The changes of the thermal deexcitation curve of the doubly activated phosphor with increased Cu content is the same as that of the $NaCl-CuCl_2$ phosphor with increased activator concentration. In the case of weakly predominant lead content (e.g. NaCl-0.04 mole% $PbCl_2$, 0.02 mole% $CuCl_2$) in doubly activated phosphor the high-temperature peak is shifted into the direction of higher temperatures and its intensity increases. Furthermore, a peak occurs at 110°C, which is characteristic of the $NaCl-PbCl_2$ phosphors. If lead predominates largely, peaks occur at 45 and 145°C which differ from those of a singly activated phosphor. Also the absorption spectra of singly activated phosphors differ from those of doubly activated phosphor. The optical density in the maximum of the F-band (465 mμ) of a doubly activated phosphor depends on the activator concentrations. If Pb largely predominates (see above) the maximum of the F-band is shifted to 460 mμ and the M-band disappears. Hence, the opinion that the interaction between the activators influences the formation of F- and M-trapping

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centers is proved. There are 1 figure and 9 references: 8 Soviet-bloc and 1 non-Soviet-bloc.

ASSOCIATION: Poltavskiy pedagogicheskiy institut im. V. G. Korolenko (Poltava Pedagogical Institute imeni V. G. Korolenko)

Card 3/4

KHLEVNYUK, A.T. [Khlivniuk, O.T.]

Absorption spectra of potassium chloride activated by copper and lead. Ukr. fiz. zhur. 9 no. 10:1079-1083 O '64 (MIRA 18:1)

1. Poltavskiy pedagogicheskiy institut im. Korolenko.

L 1919-66 EWT(1) IJP(c)

ACCESSION NR: AP5024130 UR/0185/65/010/009/1007/1014

29

26

B

AUTHOR: Khlivnyuk, O. T. (Khlevnyuk, A. T.) 44,55

TITLE: Effect of the interaction of activators and duration of X ray exposure on the absorption spectra of NaCl-Cu Pb-luminophors 21,44,55

SOURCE: Ukrayins'kyy fizychnyy zhurnal, v. 10, no. 9, 1965, 1007-1014

TOPIC TAGS: luminophor, sodium chloride, X-ray absorption spectrum, activated crystal, crystal optic property, crystal phosphor

ABSTRACT: In an earlier paper the author investigated the influence of activators on absorption spectra of KCl-Cu, Pb-luminophors (O.T. Khlivnyuk, Ukr. fizichn. zh., 9, 1079, 1964). The same paper contains a description of the experimental methods used in a study of activator spectra and supplementary absorption of NaCl-Cu, Pb-luminophors reported in the present article. Repeated measurements of the supplementary absorption spectra of luminophors with preliminary X-ray exposure before each measurement (using a short exposure) showed that these spectra depend on the length of the X-ray exposure. Such a dependence is explained by ionic processes in the crystals. It is shown that these ionic processes differ from those occurring at high temperatures. The fact that new absorption maxima arise in

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ACCESSION NR: AP5024130

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double activators with a definite concentration ratio indicates a strong interaction of these activators. Orig. art. has: 4 figures.

ASSOCIATION: Poltavs'kyy pedinstytut im. V. G. Korolenka (Poltava Pedagogical Institute) 44,55

SUBMITTED: 01Feb65 ENCL: 00 SUB CODE: OP, SS

NO REF SOV: 009 OTHER: 003

Card 2/2

L 21994-66 EWT(1) IJP(c)

ACC NR: AP6006965 SOURCE CODE: UR/0368/66/004/002/0157/0161

AUTHOR: Khlevnyuk, A. T.; Vasyagin, N. I.

27

B

ORG: none

21,44,55

TITLE: Thermoluminescence of some lamp luminophors

SOURCE: Zhurnal prikladnoy spektroskopii, v. 4, no. 2, 1966, 157-161

TOPIC TAGS: luminophor, luminescent material, luminescence, thermoluminescence

ABSTRACT: The authors investigated the thermoluminescence of many lamp luminophors produced by the industry, with the aim of studying the depth distribution of local capture levels and the magnitude of the light sum registered by them, in order to improve the quality of the lamps. The thermoluminescence was investigated between 20 and 300-400C and -180 to 20C. It is shown that the curves of thermal de-excitation of halophosphate luminophors have many high-intensity peaks, indicating that these luminophors contain many local levels of various depth and store considerable light sums. A comparison of all the thermal de-excitation curves showed that the halophosphate luminophors have the highest local capture levels and that these luminophors also store the highest light sum. A variation in the

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concentration of magnesium leads to a corresponding variation in the intensity of the initial phosphorescence of luminophors. It is concluded on the basis of the experiments that a single center of excitation is responsible for the luminescence of the luminophors studied. Consequently, it may be assumed that the luminescence of a luminophor originates with the recombination of electrons liberated from the local capture levels with the centers of excitation. Orig. art. has: 1 figure.

SUB CODE: 20 / SUBM DATE: 13Jul64 / ORIG REF: 007

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KHLEVNYUK, K.

[redacted]

Transition resistance as a fire cause. Posh. delo 3 no.3:15 Mr '57.
(Leninabad--Fire prevention) (MLRA 10:4)

VASILYUK, V.; KHLEVNYUK, S.

Pneumatic clamp. Mashinostroitel' no.6:25 Je '63.
(MIRA 16:7)

(Cutting machines)

SHEKHETS, V.P.; LITYUGA, V.S.; ANTONOV, P.K.; KHLEVNYUK, S.S.

Semiautomatic machine for testing disk springs. Mashinostroitel' no.7:10 Jl '63. (MIRA 16:9)

(Springs (Mechanism)—Testing)